Below are examples of online decision support tools DER will use as a part of the evaluation of environmental benefits for the proposed culvert replacement project. In addition to these tools, DER will use other planning and data resources and staff expertise to determine project benefits. **Applicants are not required to seek information about their culverts using the tools listed below.** <u>*This*</u> <u>*list is for informational purposes only.*</u> Towns may find these tools useful for prioritizing culvert replacements and internal decision-making purposes. **Culverts that do not appear in these online decisions support tools are still eligible for funding.**

Coldwater Fisheries Resources (www.mass.gov/info-details/coldwater-fish-resources)

A Coldwater Fish Resource (CFR) is a stream, river, or tributary where coldwater fish, such as trout, live and reproduce. CFRs are particularly sensitive habitats. **Applicability: State-wide.**

NAACC Road-Stream Crossing Database (https://naacc.org)

Based on field surveys of culverts and bridges, the North Atlantic Aquatic Connectivity Collaborative (NAACC) ranks culverts based on the severity of the fish passage barrier created by the crossing (e.g., *No Barrier, Insignificant Barrier, Minor Barrier, Moderate Barrier, Significant Barrier, or Severe Barrier).* Applicability: State-wide (Approximately 22% of culverts in Massachusetts are surveyed).

Stream Crossings Explorer (See link above and Stream Crossing Explorer Quick Reference Guide below.)

The Stream Crossings Explorer conveys information related to environmental benefits of rivers and, where available, risk of failure of road-stream crossings and associated disruption of emergency services. This tool is an extension of the NAACC database. **Applicability: State-wide.**

Mapping Data (<u>HTTPS://WWW.MASS.GOV/GET-A-MAP</u>)

MassGIS provides geospatial mapping data for all of Massachusetts. Below are examples of map data DER may review as part of the grant review process: **Applicability: State-wide.**

Conservation

- Areas of Critical Environmental Concern
- Natural Heritage Data Estimated and Priority Habitats of Rare Wildlife
- Open Space

Images (Aerial Photos and Topographic Maps) Infrastructure (Dams and Roads)

Physical Resources

- Anadromous Fish
- DFW Coldwater Fisheries Resources
- Hydrography Water Resources
- Outstanding Resource Waters
- Watershed Subbasins

Wild & Scenic Rivers (Available at www.rivers.gov)

Stream Crossing Explorer Quick Reference Guide:

Outlined below are steps to access and display data in the Stream Crossing Explorer. The steps are intended to show users how to access data for a specific municipality and to display locations with the best opportunities to reconnect upstream and downstream habitat. Additional search parameters and data selection options are available to further refine and select areas of interest.

Step 1: Select "Search Crossing" at <u>www.naacc.org</u>

NAACC Data Center	Te Con
Welcome to the NAACC Data Center!	
This website stores all the North Atlantic Aquatic Connect/why Collaborative (NAACC) data for read-shearn crossings assessments. You may search, view, map and download most of the data in Excel or Shapelile format without logging on all you are opped on, pages accessed from the enviroitation har allow for entering and connecting crossing records in the control of the gate and download the <u>Colline Data</u> Manager. One vertice VAACC and a stores can be not enviroited in the total of the total and and a store	
About the NAACC	
The NAACC is a network of individuals from agencies and organizations locused on improving aquatic connectivity across a thirteen-state region. The NAACC provides protocols for road-stream crossings (culverts and bridges) to assess and score crossings for fish and wildlife passability, as well as culvert condition and other data useful for evaluating risk of failure.	
Contact	
contact@naacc.org	
© 2007 Hoth Adark Aquic Corrells Coldwards	

Step 2: Be sure to click checkbox to analyze results for Stream Crossing Explorer!

Box unchecked:

NAACC Data Cente	r			
	Stream Crossing Explorer (SCE): To analyze search results with the OCL: only Nobe that only parameters still showing after Location (chosen multiple town, understeds): [AI States (52:69) V Albernafic Albernafic Albernafic Albernafic Albernafic Albernafic Albernafic Any Observer V Any Coordinatio V	At the box before choosing your search parameters of the box will be used for your search parameters of the	Date: Data observair is not autobe Late coloned from All Cater coloned with All Data decivery strim All Late coloned with All Late coloned with Late coloned with All Late coloned with Late coloned with All Late coloned with Late coloned with All Late coloned with Late coloned w	

Box checked (Correct Search Box):

NAACC Data Center		
	Bream Crossing Explorer (SCE): Com: Com: Com: Exclose indexe instants with the SCE, deck the too before choosing your search pairs of the schooling too any search pairs of the schooling your search pairs of the s	

Step 3: Select "Massachusetts" under Location, then select the Town you want to search in.

Then, click "Search"

NAACC	NAACC Data Center Search Crossings Login				
		Stream Crossing Explorer (SCE): To analyze search results with the SCE, che Note that only parameters still showing after Locations (rospace) - analyze of the Locations (rospace) - analyze of the Locations (rospace) - analyze of the Westfield (80) Westfield (81) Westfield (81)	ck the box before choosing your search parameters. checking the box will be used for your search. Other: "Survey of in not available when using the SCE. "Crossing Code" in not available when using the SCE. Evaluation is not available for the diseaful you selected.	Dates: "List updated" is not evalable "Date observed" is not evalable	
		All MA Watersheds Blockstone Charles Charles Personnel: not evaluate for the dataset(s) you selected	Choese Data SAta (choice multiple) address are chosen by certain when using SCE	Search	

Step 4: Click "Map With SCE."

NAACC*	NAACC Data Center Search Crossings Login					
		Bream Crossing Explorer (SCE): To sharp a search results with the SCE, check the box defore choosing your search parameters. Section (down matching from, watering) Construction (SCE) Co				
(results may include multiple serverys of some locations)						

Step 5: The map may open in a new window. Click through Tutorial Screens ("Continue", "Next" or "Skip").

NAACC: STREAM CROSSING	S EXPLORER Welcome Tutorial About SCE SHEDS Home	£ 🖨
Solect Baselayar 💌 Solect Overlay Layers 💌	Saarch map 🛛 😧 🕑 💠 🎝 🗮	
Crossings 0 3 Mapped: Imposebility Score	Welcome to the NAACC STREAM CROSSINGS EXPLORER	
Transparency	This tool helps you locate road-stream crossings based on your interests. To begin, select the crossing, stream and catchment (sub-watershed) attributes that you would like to work with.	Westover Angort
See Addition		Andrew Andr Andrew Andrew Andr
Status 0 X Attribute Progress	Check to prevent this screen from disposing again	
Unsurveyed Crossings Control Unsurations Sam 3ml Chronit's coppers		· · · · · ·

Step 6: Select the "Connectivity Restoration Potential" checkbox on the Attribute Selection table. You may want to unselect the pre-selected boxes (Impassability Score; AOP Classification) to reduce the amount of data displayed. Click "Continue with Current Selections."



Step 7: Be sure the Crossings Layer has "Connectivity Restoration Potential" selected from the drop-down menu next to "Mapped" and the box is check next to "Displayed unsurveyed crossings on map." This should display all the mapped stream crossings within your community.





Step 8: Select the "Charts" icon on the website header.

Step 9: Click "Add Chart Data" and then select "Connectivity Restoration Potential" from the drop-down menu. Click "Add."



Step 10: All crossings within your town will be displayed in the map. Stream crossings with the highest potential for restoration will be at the higher end of the scale. You can adjust the view by adjusting the range in the chart box and/or clicking and holding down your cursor to adjust the range box. The number of crossings selected is displayed above the chart data and on the map.



Step 11: Select crossing of interest to view available data, e.g. the Connectivity Restoration Potential Score and photos. If you selected other attributes, you can click "Show All" to view the other attributes.



Optional: To add Town boundaries and/or HUC 12 Watershed Layer, you can select from the "Select Overlay Layers." You can also change the map baselayer under "Select Baselayer" drop-down menu.



Optional: You can add or remove other Attributes by clicking "Select Attributes."



Optional: You can download the displayed data (as a .csv, shapefile or GeoJSON file) by selecting the download icon in the upper righthand corner.

